

Opening slide

### **NH DOT Staff**

- Commissioner George Campbell
- Assistant Commissioner Jeff Brillhart
- Director of Project Development Bill Cass
- Bridge Design Administrator Mark Richardson
- Project Manager Bob Landry

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Director of Project Development – Bill Cass
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## **Purpose of the Meeting**

- Update Officials and General Public on the Bids for the rehabilitation of the Memorial Bridge.
- Describe the options NH DOT and Maine DOT considered and which option was preferred by each State.
- Explain what the Next Steps will be.

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## **Project Need & Statistics**

- The Memorial Bridge is NH DOT #1 Bridge Priority
- Ownership and Responsibility of the Memorial Bridge is 50% NH DOT and 50% Maine DOT
- 85 Year Old Historic Bridge
- 20-Ton load capacity
- Vital Link for Commerce and Local Mobility
- 4,000 navigational lifts per year
- 11,000 vehicles per day
- Several hundred pedestrians / cyclists per day

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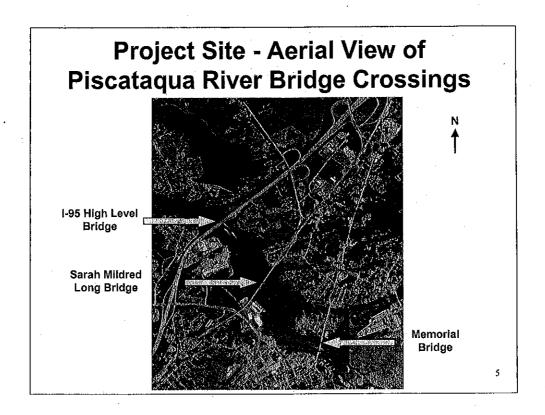
The Memorial Bridge is NH DOT #1 Bridge Priority and has been on the State's Red List since 1994.

Ownership and responsibility of the Memorial Bridge is shared equally between Maine DOT and NH DOT.

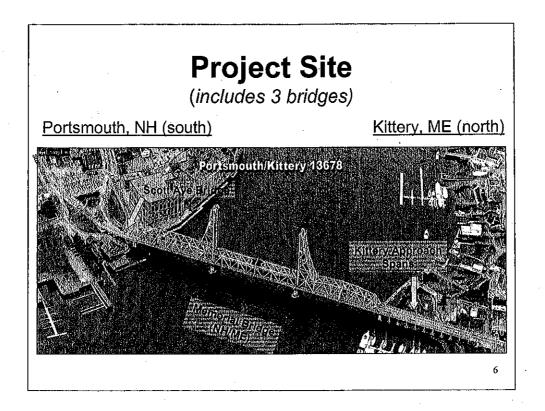
85 Year old Historic Bridge is currently posted for a 20-Ton load capacity.

The project started in 2002 to reconstruct and repair the existing Memorial Bridge and remove it from the NH DOT's Red List.

Vital Link for Commerce and Local Mobility 4,000 navigational lifts per year 11,000 vehicles per day Several hundred pedestrians / cyclists per day



Overall aerial of transportation corridor between Portsmouth, NH and Kittery, Maine



Memorial Bridge project components:

Scott Avenue Bridge Replacement (City Match of Federal Funds)

Kittery Approach Spans Rehabilitation (100% Maine DOT)

Memorial Bridge Rehabilitation, including Lift Span Replacement (50% NH DOT and 50% Maine DOT)

# Design Issues Leading up to Advertisement of the Project

- Communities and various interest groups
- Business owners
- Pedestrians
- Bicyclists
- Historic groups
- All of these groups help shape the final product
- Bid on July 29, 2008 with the following:
  - Replacement of the Lift Span
  - Rehabilitation of the Fixed Truss Spans and Towers
  - Refurbishing / replacement of the lift mechanism
  - Rehabilitation of the Kittery Approach Spans
  - Replacement of the Portsmouth Scott Avenue Bridge

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NH DOT and Maine DOT evaluated options with the communities and various interest groups for addressing the structural issues associated with the Memorial Bridge.

Business owners expressed concern regarding the timeframe for construction the bridge.

Pedestrians expressed concerns regarding alternative access during construction.

Bicyclists requested that a solid deck be provided across the entire bridge, and expressed concern regarding alternative access during construction.

Historic groups preferred rehabilitation in-kind of the entire bridge, but were agreeable to a new Lift Span and other modifications if the designs largely replicated the existing infrastructure.

The design brought forward for bid on July 29, 2008 included:

Replacement of the Lift Span with a new replica truss structure.

Rehabilitation of the Fixed Truss Spans and Towers.

Refurbishing / replacing the lift mechanism.

Rehabilitation of the Kittery Approach Spans.

Replacement of the Portsmouth Scott Avenue Bridge.

## Funding Agreement Between Maine DOT and NH DOT

- Funding 50% NH DOT and 50% Maine DOT for Memorial Bridge
- The Agreement required Maine DOT's approval to award if the low bid was 10% over the Engineer's estimate for the Memorial Bridge (\$46.42 million)

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Prior to advertising the project for construction, NH DOT and Maine DOT developed a draft Agreement addressing the shared funding of the project. Maine DOT expressed concern regarding their ability to fund the project. NH DOT is facing similar difficulties and share Maine's concern.

The Agreement included language that required Maine DOT's approval to award the contract if the low bid for the Memorial Bridge was more than 10% over the Engineer's estimate.

(\$46.42 million = bid item total plus 4% construction engineering).

### **Bidding Period**

- Aggressive Construction Schedule
- Revised the bridge full closure period from 8 months to 18 months

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During the bidding period the prospective bidders expressed concern that the construction schedule (relative to the short window of bridge closing) was too aggressive and would result in a significantly more costly project than estimated.

In response the NH DOT, with Maine DOT, City of Portsmouth and Town of Kittery concurrence, moved to revise the bridge full closure period from 8 months to 18 months.

### **Bids**

#### Bids opened October 9, 2008

- Low Bid (Cianbro) \$59,460,000 (\$15.3 million higher, 35 % over)
- (B bid = \$70.7 million)

#### Review of the Bids

- Bids were representative
- Reasons:
  - Steel prices.
  - Overall complexity
  - Amenities

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Bids opened October 9, 2008

Engineer's Estimate:

\$44,155,000

Low Bid (Cianbro)

\$59,460,000

(\$15.3 million higher, 35 % higher)

(B bid = \$70.7 million)

**Total Construction Cost** 

\$61,689,100

With input from both bidders, it was determined the bids were reasonable and representative of the cost to do the project as proposed.

Items that contributed to the bid prices being over the Engineer's Estimate included:

Steel prices.

The overall complexity of the project.

Amenities to preserve the historic fabric of the structure and the original appearance of the bridge.

#### Award the bid in total

- Memorial Bridge only costs were as follows:
  - Bid \$54,500,000
  - Additional \$6.9 million per State
  - Problematic to Fund
  - Rehabilitation projects have a higher percentage of Additional Cost

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#### Award the bid in total

Memorial Bridge only costs were as follows:

Item Bid Total, Construction Engineering, and Shop Drawing Plan Review yield a total of \$57,928,212.

Budgeted at \$44,200,000 total (with NH at \$22,100,000 and Maine at \$22,100,000). Resulted in an additional \$6.9 million per State for the Memorial Bridge effort.

This amount of funding is very problematic and would unacceptably compromise other parts of Maine's and NH's bridge and highway programs if awarded as bid.

Reduce scope of work to stay within budget.

NH DOT recommends this option to address NH

DOT's #1 priority Red List bridge

- Focus on most urgent elements items associated with replacing the lift span, strengthening the towers, and refurbishing or replacing all associated lift components.
- Addresses areas of most significant structural and operational concerns

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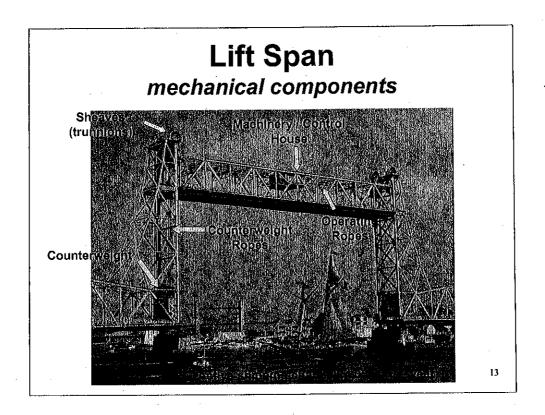
Reduce scope of work to stay within budget.

NH DOT recommends this option to address NH DOT's #1 priority Red List bridge.

Focus on most urgent elements of project – items associated with replacing the lift span, strengthening the towers, and refurbishing or replacing all associated lift components.

This approach addresses areas of most significant structural and operational concerns.

A project to rehabilitate and paint the Fixed Spans would be brought forward in the future, to complete the project.



Lift Span major components:

Towers

Lift Span

Lifting components

Reduce scope of work to stay within budget.

NH DOT recommends this option to address NH DOT's #1

priority Red List bridge

- Focus on most urgent elements items associated with replacing the lift span, strengthening the towers, and refurbishing or replacing all associated lift components.
- Addresses areas of most significant structural and operational concerns

Maine DOT rejects this option for the following reasons:

- Overly expensive and not cost effective.
- Still rehabilitated bridge
- Prioritizing bridge needs in the Portsmouth Kittery area
- Restoring the Memorial Bridge for historical reasons is not prudent

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Reduce scope of work to stay within budget.

### Maine DOT rejects this option for the following reasons:

The project as proposed in total or in phases is overly expensive and not cost effective.

Upon completion, the rehabilitated bridge will continue to deteriorate, and in the long term will return more quickly to be a financial liability.

Maine DOT's transportation needs far exceed available funding.

Consideration must be given to prioritizing bridge needs in the Portsmouth – Kittery area given the existence of three expensive bridges in close proximity to each other.

Restoring the Memorial Bridge for historical reasons is not prudent given the costs involved.

Reject Bids, Step Back, and Redesign

- Alternative designs to meet prudency.
- New Lift Span truss
- Study overall transportation connections and needs between Kittery and Portsmouth
- Maine DOT recommends this option to determine an acceptable and cost effective solution

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Redesign the project.

Consider alternative designs involving new bridge structures.

Consider a new Lift Span truss bridge re-using the existing piers and abutments.

Study overall transportation connections and needs between Kittery and Portsmouth and ways to reduce the maintenance and operational costs of the Memorial Bridge and the Sarah Mildred Long Bridge.

Maine DOT recommends this option to determine an acceptable and cost effective solution to the transportation needs provided by the Memorial Bridge.

### **Next Steps**

### Maine DOT's position means:

- Project not awarded at this time
- Project will step back
- Revisit all issues regarding the prudency of replacing the existing bridge with a new bridge.
- Review the overall transportation needs in the Kittery and Portsmouth area
- Consider construction of a new bridge or potentially closing the existing bridge and focus attention on the Sarah Mildred Long Bridge.

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#### Maine DOT's position means:

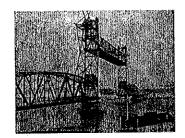
The project to rehabilitate the Memorial Bridge will not be awarded at this time. The project will be redeveloped from the beginning.

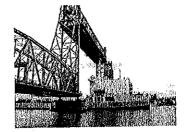
Revisit MOA regarding historic issues regarding the prudency of replacing the existing bridge with a new bridge.

NH DOT and Maine DOT will work with the City of Portsmouth and the Town of Kittery to review the overall transportation needs in the Kittery and Portsmouth area.

Consider construction of a new bridge or potentially closing the existing bridge and focus attention on the Sarah Mildred Long Bridge.

## **Questions / Comments**





Public Informational in Portsmouth, NH November 6, 2008

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